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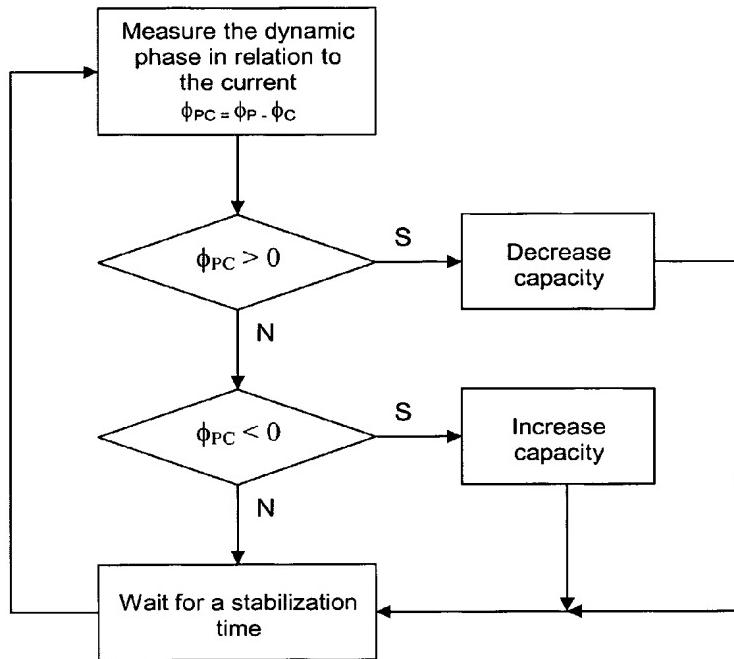
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- (54) Title: A LINEAR MOTOR, A LINEAR COMPRESSOR, A METHOD OF CONTROLLING A LINEAR COMPRESSOR, A COOLING SYSTEM, AND A LINEAR COMPRESSOR CONTROLLING A SYSTEM



(57) Abstract: A linear motor (10), a linear compressor (100), a method of controlling a linear compressor (100), a cooling system (20) and a system of controlling a linear compressor (100) to operate a linear compressor (100) in resonance in its greatest possible efficiency throughout its operation are described. One of the ways of achieving these objectives is by means of a linear compressor (100) applicable to a cooling system (20), the linear compressor (100) comprising a piston (1) driven by a linear motor (10), the piston (1) having displacement range controlled by means of a controlled voltage (V_M), the controlled voltage (V_M) having a voltage frequency (ϕ_P) applied to the linear motor (10) and adjusted by a processing unit (22), the range of piston (1) displacement being dynamically controlled in function of a variable demand of the cooling system (20), the linear compressor (100) having a resonance frequency, the processing unit (22) adjusting the range of piston (1) displacement, so that the linear compressor (100) will be dynamically kept on resonance throughout the variations in demand of the cooling system (20).

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